UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Ref 8HWM FF

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Mr Steve Slaten
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RE **Operable Unit No 1 Hot Spot Removal**

Dear Mr Slaten

EPA has reviewed the OU 1 Sampling and Analysis Plan Hot Spot Removal which was delivered by EG&G on June 15 1994 Most of EPA's comments were verbally communicated to EG&G via phone conversations conducted the following week At about the same time DOE proposed that this activity would follow the proposed Accelerated Response Action procedure that calls for the preparation of a Proposed Action Memorandum (PAM) which will be made available for a 30 day public comment period This procedure will ensure that adequate documentation of activities will be provided for the Administrative Record and that the public is made aware of these activities and given the opportunity to comment on it

EPA has the following comments and recommendations from its review of the Sampling and Analysis Plan In general this plan must be more clearly written regarding the order and rationale of radiological surveying and sampling activities that will occur as specified below An additional benefit of this action could be to gain a better understanding of the readings from in-situ radiation detectors as compared with the analytical results that will be obtained

Specific Comments

Page 6, Introduction The account of the discovery and investigation of the hot spots given here is not entirely consistent with that described in the OU 1 Phase III RFI/RI or with previous discussions between DOE and EPA DOE needs to verify and correct if necessary the events that have occurred and their corresponding dates The well number cited should be changed to 38291 Such information will not be necessary for the sampling and analysis plan but is required for the PAM

Page 9, Section 3 0 It is stated here that the excavation will be conducted using simple hand tools but during informal staff discussions the use of a backhoe was also mentioned If a

backhoe or other equipment is to be used, this must be specified This section also refers to a health and safety plan for the details of aggressive dust control measures to prevent contaminant migration during the excavation A brief summary of these measures must be included in this text and a specific document reference must also be included for further details

Pages 9 and 10, Section 3.1 The field radiological screening that is described here needs to specify more exactly the methods and equipment to be used and the rationale for these choices This is a key opportunity to not only remove radiological contaminants but to also better define and understand the procedures and equipment limitations involved with such activities

First of all it is also necessary to investigate and remove if detected two additional potential hot spots that are identified on figure 4 17 of the OU 1 RFI/RI Report These are locations 881 18/19 and 881 16/17 both of which were reported to have significantly elevated uranium levels and both of which lie in or near the former drum storage area of 119 1 Even if the initial radiological screenings do not indicate the presence of these hot spots limited confirmation sampling should be employed at the two locations

It is recommended that the first step in the radiological screening be to use the FIDLER to identify the precise location of the hot spots Readings at each location should be recorded at that time Step two would then utilize the HPGe instrument directly over each hot spot location deployed as low to the ground as possible so as to limit its field of view as much as possible The HPGe would provide isotopic identification and better sensitivity Next it might be useful to use the truck mounted HPGe raised higher from the surface to obtain one wide field of view reading that would include all hot spots in 119 1 The wide view reading should be repeated again after all sampling for comparison purposes

Once these initial field readings are taken and recorded, characterization samples should be collected from the surface of each hot spot at the suspected location of maximum radiological contamination and analyzed for radionuclides This would enable laboratory analytical results to be directly compared with the in situ field readings of both the FIDLER and HPGe Such information should be gathered whenever possible to better document and validate use of these field instruments

Page 10, paragraph 2. It is stated here that 2-6 inches of additional material will be removed after the FIDLER no longer detects the presence of radiological contamination What is the rationale for this? Removal of this additional material would generate a larger volume of material that may need to be treated

or disposed of It would also make a direct comparison of FIDLER and HPGe results impossible, since this additional removal would occur between readings from the different instruments

Table 3 1 Sampling and Analysis Methods This table does not list radiological analysis for the 9 waste characterization samples As stated above these samples would provide a valuable comparison to readings from the FIDLER and HPGe detectors Without such it would also have to be assumed that all the soils removed are radiologically contaminated, since they are coming from a hot spot area On the other hand it is also possible that previous sampling has removed the radiological contamination at some of the hot spots and if confirmed by analytical results this material would not have to be managed as a mixed or low level waste

Appendix B, Page 11 The input parameters listed here were run by EPA using the DEFT program and resulted in an output of 3 samples rather than the output of 6 samples as listed on this page If only 3 confirmation samples per hot spot are needed the total number of confirmation samples would be reduced from 28 to 14 Also this section must include a discussion of how the input parameters for action level and standard deviation were determined for both confirmation and characterization samples

If you have any questions concerning these matters please contact Gary Kleeman of my staff at 294 1071

Sincerely

Martin Hestmark Manager
Rocky Flats Project

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